UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
SERROU, ABDELALI

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 July 2009</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>19,20,22-25,27,28 and 39-42</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>19,20,22-25,27,28 and 39-42</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>22 February 2002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 7/20/09 has been entered.

Response to Amendment

2.   In response to the advisory office action mailed on 7/7/09, applicant filed an RCE on

7/20/09, amending claims 19, 23, 24, and 28, adding claims 39-42, and claims 1-18, 21, 26, and

29-38 were previously cancelled. The pending claims are 19, 20, 22-25, 27, 28, and 39-42.

Response to Arguments

3.   Applicant's arguments filed 7/20/09 have been fully considered but they are not

persuasive.

        As per claim 19, applicant argues that McAllister does not teach "identifying at least one

first data field having at least one data item that is unpronounceable". The examiner remarks

that applicant addressed only half or part of the claimed limitation. The whole limitation is

"identifying at least one-first data field having at least one data item that is unpronounceable **and**

/or exceeds a predetermined maximum length, and excluding said at least one first data field

from use as a disambiguation data field based on said identification". The examiner considered

the part that comes right after the and/or statement and rejected "exceeding a predetermined

maximum length" by using Gilai. Therefore, the arguments regarding unpronounceable data have effect.

Further, applicant argues that Gilai does not teach "identifying at least one-first data field having at least one data item that … exceeds a predetermined maximum length, and excluding said at least one first data field from use as a disambiguation data field based on said identification", stating that, in Gilai, there are no data items exceeding a predetermined maximum length because such strings are never generated. While the examiner is not sure of what applicant means by this argument, because nowhere in the claim wherein said that such strings are being generated, it would be helpful to clarify the examiner reasoning for using Gilai. As stated in the office action, McAllister teaches all the limitations of claim 19. However, McAllister does not explicitly teach identifying and excluding data fields having data items that exceed a predetermined maximum length. Gilai, who discloses a system for responding to ambiguous queries, during the process of selecting a plurality of strings of characters to which ambiguous input might correspond, he identifies strings with higher length, which correspond to low probabilities, and discard them from being used in solving ambiguous queries. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to combine Gilai's feature of identifying strings with higher length and excluding them from being used in subsequent stages with the disambiguation system of McAllister, in order to exclude data field that exceed a predetermined length from use as disambiguation data field for the retrieved database entries.

As per claims 39 and 41, applicant argues that McAllister does not teach identifying and excluding at least one-first data field having at least one data item that is unpronounceable,

stating that the passage used by the examiner is silent with respect to an unpronounceable data item and also, McAllister does not disclose any data item that is unpronounceable. The examiner notes that not every claimed term should be explicitly cited by the prior art reference. McAllister teaches speech synthesis. The database of speech synthesis system discloses a plurality of characters or phonemes that are used to synthesize speech and it should noted that during the process of speech synthesis many characters may be eliminated, For example, in German, the letter "c" is almost always followed by "h" or "k" because the letter "c" in German is somewhat redundant rule intended for use with German might either eliminate the letter "c" or replace "ch" with a single letter, such as "g" or "k," that has a similar sound (e.g., in German, the word "ich" and the monosyllabic nonsense word "ig" would be pronounced the same way). Therefore, synthesizing speech based on pronunciation rules requires identifying and excluding at least one data item that is unpronounceable.

As per the rest of the claims, and combinations of prior art reference, applicant has no further arguments beside the ones mentioned above. Therefore, all the combinations of prior art reference mentioned above are valid, and all other claims are rejected for the same reasons as set above.

Claim Objections

4.   The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

The last two added claims have been misnumbered as 39 and 40. They have been

renumbered as 41 and 42.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. The claims recite "selecting a second data field from a plurality of

common data field for use as a disambiguation data field for the retrieved database entries".

Applicant failed to point out the subject matter because selecting a <u>common</u> data field would not

help for use as a disambiguation data field for the retrieved database entries. Let's consider Fig.

1 as an example. Entries 7 and 8 have the same name 'Joe Smith", if a second common data

field is selected such as the formal last name which is "Joseph R. smith" for both entries, we will

not be able to recognize the target "Joe Smith" unless if we select another data field that is not

common for both entries such as phone number, location, or job description. To further timely

prosecution and evaluate prior art, the Examiner has interpreted this limitation as -- selecting a

second data field from a plurality of data field for use as a disambiguation data field for the

retrieved database entries --. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 19, 20, 22-25, 27, 28, and 39-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over McAlister et al., Patent No. 6,421,672 in view of Gilai et al., U.S. Patent No. 6,256,630.

As per claims 19 and 24, McAllister et al. teach a method for disambiguating search results (see abstract) comprising:

retrieving multiple database entries (multiple listings, col. 2, line 42-51) responsive to a database search, wherein said retrieved database entries include a plurality of common data fields (primary key and secondary data fields, col. 2, lines 53 and 60; and col. 5, line 6);

processing common data fields of said retrieved database entries (col. 7, lines 46-63, and col. 8, lines 44-65, wherein additional processing and database are provided to resolve the ambiguity of the listings, according to predetermined disambiguation criteria, and distinguish it between other listings, when the listings disambiguation that lead to an accurate pronunciation is not configured);

selecting a second data field from a plurality of data field for use as a disambiguation data field for the retrieved database entries (col. 2, lines 52-65, wherein when duplicated data field, such as a name, is excluded and other data fields such as the addresses of the listings are examined; and col. 3, lines 34-54, wherein the system uses hierarchical search pattern to identify distinguishing information, and determines that the locations, along with the names, of the identified listings is more suitable to identify the right candidate); and

presenting, through a speech interface (speech signal) , data items corresponding to said

selected disambiguation data field for each said retrieved database entry (see col. 3, lines 47-54),

wherein said speech interface is used in conjunction with a system in which said database search

is performed (see Fig. 1, field 34a and col. 7, lines 63-67), and wherein said speech interface

provides users of said system with an interface for searching for information contained within a

database in which said database search was conducted and with an interface for audibly receiving

results of said database search (see col. 9, lines 37-67).

McAllister does not explicitly teach identifying and excluding data fields having data

items that exceed a predetermined maximum length. Gilai, who discloses a system for

responding to ambiguous queries, during the process of selecting a plurality of strings of

characters to which ambiguous input might correspond, he identifies strings with higher length,

which correspond to low probabilities, and discard them from being used in solving ambiguous

queries (col. 12, lines 13-46, wherein the database accessing system of Gilai enters, onto a list,

only strings with a predetermined length entered by the user, and obviously ignores the rest.

Furthermore, it discards strings with lowest probability which corresponds to strings with higher

length). Therefore, it would have been obvious to a person of ordinary skill in the art at the time

of the invention was made to combine Gilai's feature of identifying strings with higher length

and excluding them from being used in subsequent stages with the disambiguation system of

McAllister, in order to exclude data field that exceed a predetermined length from use as

disambiguation data field for the retrieved database entries. Gilai suggests that would improve

the accuracy and efficiency of the retrieval process by providing the best selected candidate

entries (Gilai, col. 16, pages 14-23).

    As per claims 20 and 25, McAllister in view of Gilai teach all the limitations of claims 19, 24, 29, and 34, upon which claims 20, 25, 30, and 35 depend. Furthermore, McAllister teaches wherein data item pronounceability is determined using at least one of a determination technique based upon a failed dictionary lookup where the dictionary contains pronounceable data items and a determination technique that analyzes patterns of consonant-vowel combinations occurring within the data items (necessarily disclosed within McAllister's system, to synthesize speech, col. 4, line 61 – col. 5, line3).

    As per claims 22 and 27, McAllister in view of Gilai disclose all the limitations of claims 19, 24, 29, and 34 upon which claims 22, 27, 32, and 37 depend. McAllister does not explicitly teach wherein the maximum length is determined from an empirical analysis of a relative ease with which users recall audibly presented speech items. Gilai in the same field of endeavor teaches wherein the maximum length is determined from an empirical analysis of a relative ease with which users recall audibly presented speech items (col. 12, lines 13-46). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the similarity method of Gilai (which meets the claimed limitation of "empirical analysis of relative ease" to improve the accuracy and efficiency of the retrieval process by providing the best selected candidate entries (Gilai, col. 16, pages 14-23).

    As per claim 23, McAllister in view of Gilai disclose all the limitations of claim 19, upon which claim 23 depends. McAllister does not explicitly teach selecting the second data field based at least in part on an average length of data items of the second data field. However, Gilai identifies strings with higher length, which correspond to low probabilities, and discard them from being used or considered, (see col. 12, lines 13-46, wherein the database accessing

system of Gilai enters, onto a list, only strings with a predetermined length entered by the user,

and obviously ignores the rest. Furthermore, it discards strings with lowest probability which

corresponds to strings with higher length), which means that the selected data field was not

eliminated from further consideration based on its average length. Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to use the

determining step of Gilai et al. in the processing step of McAllister et al., because this would

improve the accuracy and efficiency of the data retrieval process by providing the best selected

candidate entries (Gilai, col. 16, pages 14-23).

As per claim 28, McAllister in view of Gilai teach all the limitations of claims 24, and

34, upon which claims 28 and 38 depend. Furthermore, McAllister teaches receiving a user

input specifying a data item associated with said selected disambiguation data field to

disambiguate said retrieved database entries (col. 3, lines 55-65).

As per claims 39 and 41, McAllister in view of Gilai disclose all the limitations of claim

19, upon which claims 40 and 42 depend. Furthermore, McAllister teaches pronunciation rules

for generating speech (col. 5, lines 14-24, and col. 7, lines 57-63). Based on these pronunciation

rules, the system of McAllister would automatically ignore data items that do not convey with

the pronunciation rules to output an utterance. Generating speech requires excluding data items

that are not pronounceable.

As per claims 40 and 42, McAllister in view of Gilai disclose all the limitations of claim

19, upon which claims 40 and 42 depend. McAllister does not explicitly teach identifying and

excluding data fields having data items that exceed a predetermined maximum length. Gilai,

who discloses a system for responding to ambiguous queries, during the process of selecting a

plurality of strings of characters to which ambiguous input might correspond, he identifies strings with higher length, which correspond to low probabilities, and discard them from being used in solving ambiguous queries (col. 12, lines 13-46, wherein the database accessing system of Gilai enters, onto a list, only strings with a predetermined length entered by the user, and obviously ignores the rest. Furthermore, it discards strings with lowest probability which corresponds to strings with higher length). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to combine Gilai's feature of identifying strings with higher length and excluding them from being used in subsequent stages with the disambiguation system of McAllister, in order to exclude data field that exceed a predetermined length from use as disambiguation data field for the retrieved database entries. Gilai suggests that would improve the accuracy and efficiency of the retrieval process by providing the best selected candidate entries (Gilai, col. 16, pages 14-23).

Conclusion

Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

When responding to this office action, applicants are advised to clearly point out the patentable novelty which they think the claims present in view of the state of the art disclosed by the references cited or the objections made. Applicants must also show how the amendments avoid such references or objections. See 37C.F.R 1.111(c). In addition, applicants are advised to provide the examiner with the line numbers and pages numbers in the application and/or references cited to assist examiner in locating the appropriate paragraphs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdelali Serrou whose telephone number is 571-272-7638. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Abdelali Serrou/   /David R Hudspeth/
Examiner, Art Unit 2626   Supervisory Patent Examiner, Art Unit 2626